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cc: Education - Game  
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MICHIGAN DEPARTMENT OF CONSERVATION  
COOPERATING WITH THE  
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March 14, 1950

Report No. 1248

ANGLING RESULTS ON KINNE CREEK, WINGLETON CLUB,  
1949 SEASON

By

David S. Shetter and Karl E. Proshek

ABSTRACT

The angling results for the 1949 season, on Kinne Creek, a trout stream owned by the Wingleton Club, 8 miles west of Baldwin in Lake County, were tabulated and analyzed. On 87 angling days in which 310.4 hours of fishing were carried on, 270 trout were captured, or 0.87 fish per hour (3.10 fish per angling day). Thirty-four individuals recorded their angling. The catch was composed of 23 brook trout (average size, 8.0 inches), 116 brown trout (average size, 9.2 inches), and 131 rainbow trout (average size, 11.2 inches). The majority of the rainbow trout resulted from a planting of 500 fish in mid-May. Angling pressure was heaviest in June and the most fish were removed in that month.

Individual anglers were compared on a basis of total trout caught, and also on a basis of catch per hour. It was noted that the approximate 1/5 of the anglers who caught 10 or more trout accounted for about 60 percent of the total angling time and took 69 percent of the total catch. There were 13 anglers whose catch per hour was 1.00 or more, and this group made up about 38 percent of the total anglers, expended about 54 percent of the

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total hours and also caught about 69 percent of the season's total catch.

It was interesting to note that the less successful anglers caught a higher percentage of rainbow trout than their more expert friends.

Planting recommendations were made and briefly discussed, and a population study suggested.

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This report presents the angling results on Kinne Creek for the 1949 season as they were recorded by Wingleton Club members. Kinne Creek is a tributary of the Pere Marquette River, entirely under the control of the Wingleton Club. This creek is located in Lake County about 8 miles west of the town of Baldwin.

Earlier records, dating back to 1892, give the total number of trout captured per annum. Institute reports were initiated in 1938 and have been continued through the cooperation of the club members.

Angling Results (Table 1)

The total catch for the 1949 season was 270 trout divided as follows: brook trout, 23; brown trout, 116; rainbow trout, 131. The average total length of the season's catch was 10.1 inches. This represents the creel return from 310.4 hours of angling. The average angler caught 0.87 trout per hour or 3.10 trout per angler-day.

The trout season opened on April 30. There was light fishing pressure during early May, but it steadily rose from mid-May to the season's peak in June. Angling pressure declined during July but returned to the May level during August. Angling in September was minimal.

Table 1. Angling results, Kinne Creek, 1949 trout seasons.  
Average lengths are given in parentheses.

Month	Number of angling days	Total hours fished	Trout catch by species			Total catch	Catch per hour	Catch per angler	Average daily angling pressure (hours)
			brook	brown	rainbow				
April	2	4.0	2 (8.5)	...	...	2 (8.5)	0.50	1.00	4.00
May	19	75.5	14 (8.1)	20 (10.0)	23 (10.6)	57 (9.8)	0.75	3.00	2.44
June	32	102.4 ✓	4 (7.6)	37 (9.4)	56 (11.4)	97 (10.5)	0.95	3.03	3.41
July	15	48.0	3 (7.5)	35 (8.9)	15 (11.2)	53 (9.4)	1.10	3.53	1.56
August	17	74.5	...	24 (8.6)	36 (11.3)	60 (10.2)	0.81	3.53	2.40
September	2	6.0	...	...	1 (12.0)	1 (12.0)	0.17	0.50	0.55
Totals	87	310.4 ✓	23 (8.0)	116 (9.2)	131 (11.2)	270 (10.1)	0.87	3.10	2.30

✓ Two anglers failed to report hours fished. Hours were assigned these anglers on the basis of average time angled by those who reported for that month.

Reference to Table 2 indicates the 1949 catch per hour to be somewhat lower in comparison with other years for which records are available. However, the catch per angling day for 1949 (3.10 fish) was above the grand average for the last 6 years (2.82 fish), the catches for which are recorded in this manner. Although the catch per hour was lower, the average Kinne Creek angler in 1949 was apparently spending more time on the stream.

#### Rainbow Trout

The club planted 500 rainbow trout in mid-May of 1949. Most of these fish were within a 9-12 inch size range and were obtained from Castalia Farms, Ohio.

The season's catch was 131 rainbow trout or 48.5 percent of the total take. Of these fish, 9 were caught prior to the planting date. Therefore, 122 rainbows were the maximum number of trout in the catch which could have originated from this year's plant. As it has been demonstrated by records from previous years, only a few "carry-over" or native rainbow trout normally appear in the catch. Therefore, we may calculate that the 1949 recovery of rainbow trout is slightly less than 24 percent. This recovery percentage is somewhat lower than previous records have indicated for this species. The average size of the 1949 rainbow trout catch was 11.2 inches, and was determined largely by the average size of the planted fish. They ranged in size from 7.5 to 16.0 inches.

#### Brown Trout

The season's catch was 116 brown trout or 43.0 percent of the total take. The average size of the brown trout captured was <sup>9.2</sup>~~11.2~~ inches and included fish ranging from 7 inches to 13.5 inches.

The last planting of brown trout occurred in 1947, and the 1949 brown trout catch presumably consisted of native fish.

Table 2. A summary of angling results, 1938-1949

Year	Angling days	Number of legal trout stocked			Number of legal trout caught			Total catch	Catch per angling day	Catch per hour
		brook	brown	rainbow	brook	brown	rainbow			
1938	251	1500	...	...	346	370	4	720	2.86	...
1939	...	...	994	2	92	279	3	374	...	...
1940	...	167	...	250	92	96	88	276	...	...
1941	100	302	201	203	162	145	82	394 <sup>↓</sup>	3.94	...
1942	...	50	200	250	143	229	144	516	...	...
1943	...	50	200	250	75	153	145	373	...	...
1944	89	...	...	...	62	120	7	189	2.12	0.62
1945	44	...	...	...	33	69	13	115	2.61	0.94
1946	102	...	...	500	71	90	182	343	3.36	1.24
1947	110	...	200	200	69	191	130	390	3.54	1.07
1948	167	...	...	500	61	131	196	388	2.32	1.03
1949	87	...	...	500	23	116	131	270	3.10	0.87

↓ Five trout unidentified as to species added to total by species.

### Brook Trout

The season's catch was 23 brook trout or 8.5 percent of the total take. The average length of the 1949 brook trout catch was 8.0 inches (range 7.0 inches to 9.0 inches).

The last planting of brook trout was made in 1943.

Nine of the brook trout were taken above the railroad grade, and 14 brook trout were captured between the railroad grade and the lower screen. This is the poorest catch of brook trout reported during the past 12 years, particularly in the section of stream above the railroad grade. Is this because of relatively low angling pressure (11.0 hours in 1949) or is the brook trout population diminishing because of unfavorable habitat changes in this stream area?

### Comparison of the Anglers

Angling success for the season as measured by total trout caught by individuals varied from 1 to 44 trout, with individual anglers spending from 0.5 to 41.5 hours. A total of 34 different anglers made 87 angling trips. Reference to Table 3 shows a comparison of anglers based on total trout caught during 1949 (Table 3 A) and success per unit of time (Table 3 B).

It is especially interesting to note that individuals catching 10 or more trout (20.6 percent of the total) caught 69.3 percent of the total trout production (Table 3 A). At the same time, this group of anglers spent 59.0 percent of the total time angled. As the success of individual anglers diminished, there was noted a steady decline in catch per hour, as well as the amount of time spent fishing.

Reference to Table 3 (B) reveals a higher percentage of brown trout in the catch of those anglers who averaged more than 1 fish per hour. The rainbow trout apparently provided most of the sport for the less successful

Table 3. A comparison of individual anglers, 1949, Kinne Creek

(A) Based on individuals' creel success

Trout per season	Number of anglers	Hours fished	Number of trout	Percent of time	Percent of trout	Average catch per hour	Percent of anglers	Percentage composition of catch		
								brook	brown	rainbow
10 or more	7	183.0	187	59.0	69.3	1.02	20.6	10.7	44.4	<del>34.9</del> 49.9
5-9	6	54.5	43	17.6	15.9	0.79	17.6	2.3	37.2	60.5
2-4	9	43.9	28	14.1	10.4	0.64	26.5	0.0	35.7	64.3
1	12	29.0	12	9.3	4.4	0.41	35.3	8.3	50.0	41.7
0	0	...	...	...	...	...	...	...	...	...
Total	34	310.4	270	100.0	100.0	0.87	100.0	8.5	43.0	48.5

(B) Based on individuals' catch per hour

Catch per hour	Number of anglers	Hours fished	Number of trout	Percent of time	Percent of trout	Percent of anglers	Percentage composition of catch		
							brook	brown	rainbow
1.00 or more	13	167.0	187	53.8	69.3	38.2	8.6	51.3	40.1
0.75-0.99	2	38.5	33	12.4	12.2	5.9	9.1	3.0	87.9
0.50-0.74	9	47.2	28	15.3	10.3	26.5	14.3	35.7	50.0
0.25-0.49	9	53.2	21	17.1	7.8	26.5	...	38.1	61.9
0.00-0.24	1	4.5	1	1.4	0.4	2.9	...	100.0	...
Total	34	310.4	270	100.0	100.0	100.0	8.5	43.0	48.5



anglers. When tabulated by skill, the individuals who had catches of 1.00 fish or more per hour comprised 38.2 percent of the individuals and they caught 69.2 percent of the total catch and their hours made up 53.8 percent of the total fishing effort.

#### Recommendations

1. Better use of planted trout could be attained if plantings were smaller and more frequent, i.e. mid-May, mid-June and mid-July releases of no more than 150 trout each.

2. Rainbow trout or brook trout should continue to be the preferred species for future stocking. Planted rainbow trout have produced the highest percentage of return and have been more generally distributed among anglers of varying skill.

3. In view of the fact that relatively few native brook trout are now being taken above the railroad grade, a stocking of 50 adult brook trout is suggested to furnish better angling on this part of the stream. These fish should be released at mid-May. At the same time 50 adult brook trout might be planted in the stream below the railroad grade for early-season fishing. (Note: A good source of disease-free brook trout now appears to be the Cedar Brook Trout Hatchery, Harrisville, Michigan. Other species of trout also are available.)

It is suggested that 150 adult rainbow trout be released sometime during the last 10 days of June and July.

4. A population study of the stream would be very desirable. At present, it appears that the wild population is predominantly brown trout. However, we have no indication of what percentage of the legal brown trout population appears in the creel, nor of the species composition among the sub-adult

fish. Knowledge of such facts might enable wiser management recommendations than are now possible and would indicate the need, if any, for brown trout plantings.

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